

Notice of Allowability

Application No.

Examiner

William C. Choi

Applicant(s)

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308

1. ☒ This communication is responsive to Applicant's Response filed 8/14/2003
2. ☒ The allowed claim(s) is/are 1-19
3. ☒ The drawings filed on 16 October 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
(a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No. _____.
(b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
(c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
3 ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
5 ☒ Information Disclosure Statements (PTO-1449), Paper No. 8/14/2003
7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material 8/24/2003
- 2 ☐ Notice of Informal Patent Application (PTO-152)
4 ☐ Interview Summary (PTO-413), Paper No. _____.
6 ☐ Examiner's Amendment/Comment
8 ☒ Examiner's Statement of Reasons for Allowance
9 ☐ Other

Georgia Epps
Georgia Epps
Supervisory Patent Examiner
Technology Center 2800

Allowed Claims: 1-19.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 1, none of the prior art alone or in combination disclose or teach of a method of measuring dishing as claimed, specifically comprising generating a set of calibration data; measuring the height variation of a first feature on a substrate and correlating the height variation of the first feature with the calibration data as claimed.

Specifically, with respect to independent claim 14, none of the prior art alone or in combination disclose or teach of a method of producing a set of calibration data for comparing to the measured height variation of a first feature as claimed, specifically comprising providing at least one sample substrate having a plurality of first features having differing widths and exhibiting dishing, surrounded by a second feature, measuring the magnitude of the dishing of the plurality of the first features and relating the magnitude of dishing to at least one of the first feature widths and the profile shape of the first features.

Specifically, with respect to independent claim 17, none of the prior art alone or in combination disclose or teach of a method of measuring dishing in a first feature as claimed, specifically comprising measuring the height variation of a first feature

embedded in a second feature, to determine the profile shape of the first feature and comparing the height variation of the first feature with pre-generated calibration data that relates the magnitude of dishing to the profile shape of a first feature.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CITATION OF RELEVANT PRIOR ART

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnson et al (U.S. 6,623,991 B2) is being cited herein to show a method, which can be used to measure dishing, but does not specifically disclose the calibration data or profile shape limitations of that of the claimed invention.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (703) 305-3100. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703)

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305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

W.C.
William Choi
Patent Examiner
Art Unit 2873
October 7, 2003


Georgia Epps
Supervisory Patent Examiner
Technology Center 2800